

# IMPROVISED NINJA SMOKE DEVICES



By Toshitora Yamashiro

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**BUTOKUKAI**

Cornville, Arizona 86325

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**IMPROVISED NINJA  
SMOKE DEVICES**

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# TABLE OF CONTENTS

## FOREWORD ..... 1

### PART ONE:

#### The Manufacture of Ninja Smoke Devices

#### Section 1, Basic Smoke Grenade ..... 3

#### Section 2, Advanced Smoke Grenade ..... 10

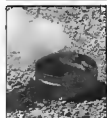
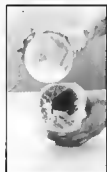
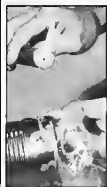
### PART TWO:

#### Section 1, Individual Katon Jitsu Skills for use with Smoke Devices ..... 23

#### Section 2, Ninja Strategies and Techniques for Using Smoke Devices ..... 24

#### APPENDIX A, Formulas ..... 27

#### APPENDIX B, Suppliers ..... 29



## WARNING

The author, editor, and publisher do not assume responsibility for the use of any of the information contained within this book. Those who choose to use this information incur all risk and liability, and are completely responsible for any damage, injury, or legal infractions.

The manufacture of explosive and pyrotechnic devices is very hazardous, and may even be illegal in some areas. Safety measures must be taken in order to avoid serious injury or death. Check federal, state, and local laws concerning the production of such devices.

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## FOREWORD

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The Ninja of feudal Japan were among the first to see the value of using smoke to assist their operations. Through the development and production of simple but effective smoke devices (and their matchless training and skill), the Ninja have learned to take the utmost advantage of the use of smoke to achieve their objectives.

The manufacture of smoke devices is part of the Ninja skill of yogen or chemistry which originated in China and was imported to Japan during the 13th Century along with knowledge concerning the manufacture of fireworks and gunpowder. The Ninja of this period, always eager for new technology, adopted the rudiments of this field. For hundreds of years since that time, the Ninja have steadily improved upon their expertise, advancing with the technology.

During the same course of time, the Ninja developed a special field of techniques and tactics to be used along with their smoke devices. This body of knowledge is called Ka Ton Jitsu, the art of using fire and smoke for purposes of offense, defense, infiltration, and escape.

This manual is primarily divided into two parts. The first part deals with yogen, particularly, those areas of Ninja chemistry dealing with the manufacture of smoke devices. The second part involves a description of Ka Ton Jitsu principles, strategies, and techniques for using smoke devices.

In order to use this manual, begin by learning in Part One how to make the two types of smoke grenades presented. First, read through the directions completely in order to gain a general understanding of the procedure involved. Examine the instructional photographs and diagrams. Refer to the lists of the chemicals, the materials needed, and the safety procedures. Gather the necessary supplies and equipment. Maintain proper safety and follow the production steps implicitly.

The complete procedures for manufacturing two types of Ninja smoke grenades are included in these pages. The first: Type 1, is a basic device. The second: Type 2, is more sophisticated. Learn how to manufacture both of these devices to begin with. Using the various options given at the end of each section, and the wide variety of formulas listed in Appendix A, practically any kind of a device can be made by adding to or modifying the two basic designs given. All devices should be tested prior to actual use.

# PART ONE

## THE MANUFACTURE OF NINJA SMOKE DEVICES

### SECTION 1: DEVICE TYPE 1; BASIC SMOKE GRENADE

#### List 1.1: Basic Smoke Formula

##### Red Smoke

*Volium*  
Paranitranilane red—3 lbs.  
Potassium chlorate—1 lb.  
Sugar—1 lb.

#### List 1.2: Materials Needed

*Verifying*  
*Schubert*  
Accurate measuring scale *off*  
Wooden or plastic spoons (never metal)  
Disposable plastic cups (clear if possible)  
Bowls or jars with lids (for measuring and storage)  
Large sections of 200 mesh screen, or large wire kitchen strainers *sub*  
Large sheets of paper (or newspaper)  
A mixing device: 1) a large jar with a lid, or 2) a clear, tough plastic bag, or 3) a large tough paper sack  
*Lock*  
Punches, nails, and Exacto knives (for making exhaust ports in metal or plastic)  
*Asst. Sch*  
One size 16 ounce metal or plastic canister (the grenade case) with a lid if possible  
One candle *sub*  
Melted wax (for waterproofing)  
Plastic funnels *Trickler*  
Fusels *sub*  
Thin pliable wire *sub*  
*Pope*  
Cardboard for clips and spacers *sub*

#### List 1.3: Safety Precautions and Procedures

*Brill*  
Wear safety goggles for eye protection  
Wear a dust mask (optional)  
Work in a well-ventilated area  
Work in a spark-free environment (never strike metal on metal around smoke powders)

Do not smoke or have open flame near smoke powders  
Store all smoke chemicals and devices away from small children and heat sources

#### List 1.4: Production Steps for a Type 1 Device

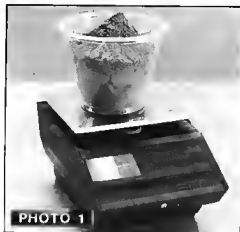
1. Measure out the powdered chemicals separately on an accurate scale, according to the formula. *sub*
2. Sift each of the chemicals separately, and then combine and sift them together.
3. Mix the chemicals thoroughly in the mixing device.
4. Resift the mixed chemicals.
5. Select and prepare the grenade canister(s).
6. Fill the grenade canister with smoke compounds.
7. Install the fuse.
8. Cap and seal the device. *Verifying*

#### Detailed Description of Each Production Step

Step 1: Measure out the powdered chemicals separately using an accurate scale, according to the formula (see photo 1).

It is extremely important that all smoke formula powders be measured out by units of weight such as ounces, pounds, or kilograms. Never measure powders out by units of volume such as cups, pints, liters, or gallons. When a formula calls for 1 part of Potassium chlorate, measure that one part out in either ounces (for a small test batch) or in pounds *sub*

## IMPROVISED NINJA SMOKE DEVICES



(for a larger batch). This rule will hold true for all of the formulas in this manual.

Next, when using the scale to weigh out the parts of a formula, do not include the weight of the measuring container. This may prevent the formula from functioning properly. Avoid this problem by placing the measuring container on the scale and adjusting the scale to zero. Once the scale is zeroed in, it will measure only the amount of powdered chemicals, and not the weight of the container in which they are placed. This is very important. Each time a different measuring container is used, the scale must be zeroed in again.

Consulting the formula above, measure out the parts by weight, as instructed. The measurements must be exact. Use a spoon to add or subtract small amounts of powder. Keep the three chemicals separate. They can be stored indefinitely in any dry container with a lid. Always label the container immediately to avoid forgetting what has been put into it. Never mix unknown substances.

**Step 2:** Sift each of the chemicals separately, and then combine and sift them together.

First, using the sections of 200 mesh screen (or optionally, the kitchen strainers), press each of the chemicals through separately, sifting them onto sheets of paper (see photo 2). Then lift up the paper by the corners and carefully pour the sifted powder back into the container (see photo 3).

After the chemicals are sifted separately, they must be combined and sifted together. Pour them



all together onto or into the sifting device, and push them through onto another piece of paper (see photo 4). The sifted compound that results is then ready for mixing. Above all else, keep the mixing device and the powders dry to avoid clogging during sifting.

**Step 3:** Mix the chemicals thoroughly.

Pour the combined and sifted smoke compound into the mixing device. For obvious reasons, a clear mixing device is better. A simple look will show whether the smoke compound is thoroughly mixed or not. To mix, simply close the opening and shake the powders together, until they are blended completely (see photo 5). To work properly, the mixture must be uniform throughout.

**Step 4:** Resift the mixed chemicals.

Resift the compound exactly as described before in Step 2. Push the powder through the sifting device and onto a large sheet of paper. Carefully lift the paper up by the corners again, and pour the compound into a storage container and label it. The smoke powder is now ready for testing. If prepared properly, it should ignite easily at the

# IMPROVISED NINJA SMOKE DEVICES



PHOTO 3



PHOTO 4



PHOTO 5



PHOTO 6

touch of a match.

Test only a small quantity of the compound (no more than a spoonful or two). Do the testing outside in a safe area where no fire will start. Burn the compound in a shallow tin can if possible (see photo 6). Once tested successfully, the smoke compound will then be ready for use in a smoke device.

Step 5: Select and prepare the grenade canister.

Select a canister for the grenade. For a Type 1 device, metal or plastic will usually do. Metal cans of the 16 ounce size and variety (including beverage cans) will work well (see photo 7). The container should be clean and dry.

Next, exhaust ports must be punched into the side of the canister to allow the smoke to escape. See figure 1 for exhaust port configurations. The



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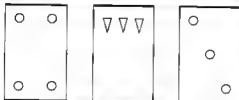


FIGURE 1

exhaust ports can be made in metal cases with any punch, nail, or even a can opener (see photo 8). For plastic canisters, a nail heated over a candle will melt holes through, or an Exacto knife can be used to cut out the ports.

Install six exhaust ports in one of the illustrated configurations. Once these have been made, they must be lined on the inside with plastic wrap or a plastic bag (see photo 9), and coated on the outside with tape and/or melted wax (see photo 10). This will keep the powder dry and prevent it from spilling out of the exhaust ports. Yet, when the device is ignited, the plugs will burn through and release the smoke.

Step 6: Fill the canister with smoke compound.

Using a funnel, if necessary, fill the canister loosely with the smoke compound (see photo 11).



PHOTO 8



PHOTO 9

Never ram or pack smoke powders. Remember to be careful to work in a spark-free environment. Fill the case up to an inch or a half inch away from the top. There must be room to cap and seal the device (see photo 12).

Step 7: Install the fuse.

Cut the right length of fuse for the desired delay. Most fuse is sold in coils (see photo 13); test each coil to find its burn time and label it. Burn time can

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PHOTO 10

PHOTO 11

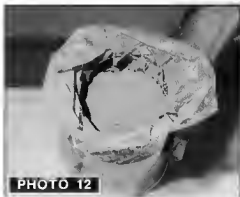


PHOTO 12



PHOTO 13

be found by the following equation:

Burn time in seconds/length of test fuse

*12.5 sec*

Therefore, if a 5-inch section of fuse takes 15 seconds to burn from end to end, the burn time of the fuse is 3 seconds per inch. For a fuse delay of 6 seconds on a smoke grenade, two inches of fuse must protrude from the smoke compound. To insure proper ignition, cut the fuse so that one end touches the bottom of the canister, and the desired delay length protrudes from the top.

To secure the fuse beneath the cap, twist a tight coil of thin pliable wire around the fuse (see figure 2). Then form a spring-like coil (see figure 3). This will help prevent the fuse from falling or being pulled out of the canister. Insert both the fuse and the wire retainer into the center of the smoke compound of the grenade (see figure 4).

# IMPROVISED NINJA SMOKE DEVICES



Step 8: Cap and seal the device.

To cap the smoke grenade, use either the lid or cut a spacer disk out of cardboard that will fit the mouth of the device (see photo 14). Punch a hole in the center of the lid for the fuse. Slip the lid over the fuse until it is covering the powder (see photo 15). Seal the top of the device with melted wax up to the brim, or tape the lid shut with waterproof tape and seal the fuse port area with melted wax (see photo 16). A cut away diagram of a typical Type 1 device is shown in figure 5. Once the wax has hardened, the device is ready for testing. Test the device outside; a secluded area is best.

If these simple instructions are followed to the letter, it will be easy to produce safe and effective smoke grenades. Any of the formulas in Appendix A will work in a Type 1 device, but some of them may need the assistance of an igniter to start them burning.

## Igniter Option

Two very effective igniter formulas are also given in Appendix A, along with the smoke

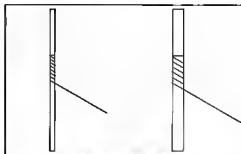


FIGURE 2

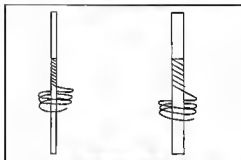


FIGURE 3

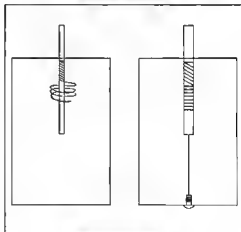


FIGURE 4

# IMPROVED NINJA SMOKE DEVICES

PHOTO 15



PHOTO 16



PHOTO 17

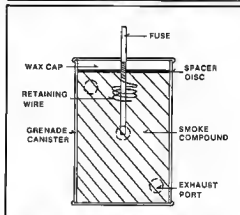


FIGURE 5

Using an igniter is simple. During Step 6, when filling the canister, leave an extra half inch at the top and fill with igniter compound (see photo 17). Then follow Steps 7 and 8 as before. The fuse will light the igniter, which will in turn burn down and set off the smoke compound very effectively.

*Revised*  
formulas. Each formula will designate whether or not an igniter is required along with it. Although many formulas do not need the assistance of an igniter, the Ninja chemist usually includes the igniter just to make the smoke grenade that much more reliable.

*subliming*

## IMPROVISED NINJA SMOKE DEVICES

### SECTION TWO: DEVICE TYPE 2; ADVANCED SMOKE GRENADE

#### Exploding Smoke Cloud

To manufacture more complex and sophisticated devices, only a few additions and modifications to the basic procedure are required. Notice how many of the steps below for the production of a Type 2 device remain the same or are only slightly changed from those for a Type 1 device. Refer back to the Type 1 section for a detailed description of the repeated steps.

#### List 2.1: Basic Formulas

##### Black Smoke

*Elfenbein*  
Ivory Black—1 lb. 373g  
*Kohlen* Sugar—1 lb. 373g  
Potassium chlorate—3 lbs. 7143g  
*Kolophonium* Rosin—1 lb. 373g

#### List 2.2: Additional Materials

*30 cm*  
A yard of thin cloth  
String  
Kitchen matches *Stichtöhren*  
Gunpowder or explosive powder

(In addition to these items, assemble the same materials required as for Section 1)

#### List 2.3: Safety precautions and procedures.

Same as in Section 1.

#### List 2.4: Production Steps for a Type 2 Device.

1. Measure out the powder chemicals separately, according to the formula.\*
2. Sift the chemicals separately, and then combine and sift them together.\*
3. Mix the chemicals thoroughly in a mixing device.\*
4. Resift the mixed chemicals.\*
5. Select and prepare the grenade canister.
6. Prepare a friction type fuse mechanism.

*Verbreitung*  
7. Prepare a diffusion charge and insert the fuse device.

8. Fill the case and insert the diffusion charge.

9. Cap and seal the device.\*

\* Indicates that the step is the same as described in Section 1.

The following are detailed descriptions of the modified and additional steps for producing a Type 2 device.

Step 5: Selecting and preparing grenade canisters (modified from Section 1).

Follow the same instructions as for a Type 1 device, but use a smaller canister—such as a 475 ounce can (see photo 18), and add more exhaust ports (use at least a total of twelve). See figure 6 for possible exhaust port configurations for an exploding smoke cloud. Type 2 devices need more exhaust ports in order to allow the smoke to expand more rapidly.

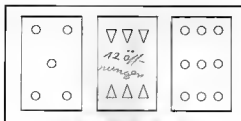


PHOTO 18

Step 6: Prepare a friction fuse mechanism.

*intelligent* *erweitern*  
A more sophisticated and reliable fuse device can be made by surrounding the fuse with kitchen matches (see figure 7). The match sticks can be cut to length just as the fuse, to fit the desired delay

# IMPROVED NINJA SMOKE DEVICES



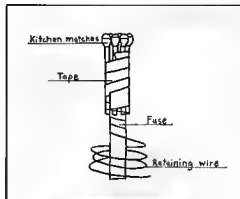
**FIGURE 6**

length. Add a wire retainer just as for a Type 1 fuse (see photo 19). Once installed, no lighting tool is required. Scrape the match heads against a rough surface, such as a piece of sandpaper. The burning match heads will insure proper fuse ignition. This is the simplest type of friction fuse device. Even more sophisticated versions will be presented in the options listed at the end of Section 2.

Step 7: Prepare a diffusion charge and insert the fuse device.

An exploding smoke cloud requires a small diffusion charge to force the smoke powder surrounding it out of the exhaust ports and into an instant cloud. To emphasize, it must be a small

*beginning*

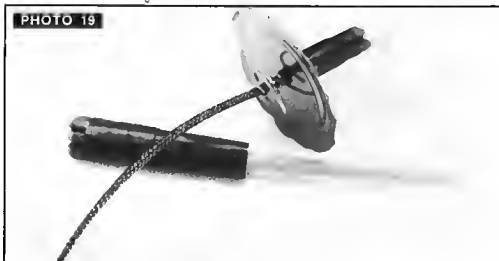


**FIGURE 7**

charge. Ninja often use these devices in close proximity to themselves. The idea is to create an instant smoke burst, not a hand grenade-like explosion. The diffusion charge should be just large enough to blow out the smoke powder, not send shrapnel flying. A few ounces of explosive powder is often enough.

To make the diffusion charge, pour a few ounces of explosive powder onto the middle of a three-inch square of thin cloth (see photo 20). Gather the cloth

*30% 2,500 lbs*



**PHOTO 19**

# IMPROVISED NINJA SMOKE DEVICES

PHOTO 20



PHOTO 21



up into a tight little sack and insert the friction fuse mechanism (the type described above in Step 6) into the center of the charge. Tie the top of the charge off tightly with a piece of string. The explosive diffusion charge is now ready (see photo 21).



PHOTO 21.1

Step 8: Fill the case and insert the diffusion charge.

This step is modified from Section 1 to the extent that during the filling of the case, the diffusion charge is inserted into the center of the smoke powder. The top of the fuse device, however, must protrude above the cap—even in short delay devices. See figure 8 for a cut away diagram of a Type 2 smoke device.

## Options

Another way to make a Type 2 smoke device is to substitute a larger cloth bag for the canister. This will further lessen the chance of flying shrapnel, even more. The bag can be made from a nine-inch

22 cm



PHOTO 21.2

*Abdullah*  
square of cloth. Line it with plastic wrap or a plastic bag. This will take the place of Step 5. Obviously since the thin cloth bag will burst open easily, no exhaust ports are needed. The rest of the steps basically remain the same. The bag is filled, the diffusion charge is inserted into the center, and instead of capping, the bag is tied off around the fuse at the top. See figure 9 for a cut away view of this Type 2 variation.

*Emmanuel*  
*Two other reliable friction fuse mechanisms*  
deserve mention as possible options. These are more sophisticated fuse mechanisms, and they also dispense with the need to have a match or other lighting device on hand. These mechanisms used by the Ninja are generally of two basic types: 1) the Pull Type Friction Device, and 2) the Striker Type Friction Device.

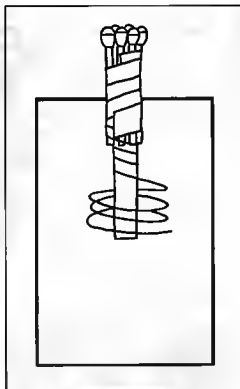


FIGURE 8

Type 1: The Pull Type Friction Device.

*overload*  
The pull type mechanism can be readily purchased and is inserted over the fuse. A simple pull of the ring or wire ignites the fuse and starts it burning (see figures 10, 11 and Appendix B).

Type 2: The Striker Type Friction Device.

This friction type mechanism is excellent for use in short delay devices (such as Type 2 device, see Section 2). This type of fuse igniting is very similar in principle to that which is found on simple emergency flares. There are two ways to make such devices, which consist primarily of two parts: the striker and the igniter.



# IMPROVED NINJA SMOKE DEVICES

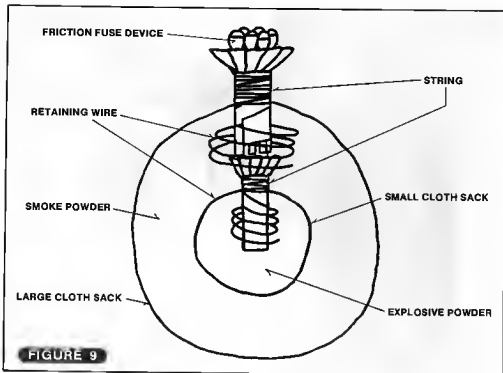


FIGURE 9

Both methods use the same chemicals found in emergency flares. The easiest way to obtain the striker compound (the red material) and the igniter compound (the black material) is to remove the substances from inexpensive emergency flares and transfer them to smoke devices. The striker is reusable and may be used with little or no modification, since it is usually nothing more than a detachable cap. The igniter compound must be removed from the flare, ground or powdered, and then dissolved in a small amount of carbon tetrachloride, a common degreasing solvent found in most auto shops.

## Danger

Dissolve the black substance in the Carbon Tetrachloride either outside or in a well-ventilated area only. The resulting fumes are toxic. Avoid breathing them as much as possible. Use only

enough solvent to dissolve the mixture and then let the liquid evaporate in a well-ventilated area. The less liquid, the faster the evaporation.

What will remain after evaporation will be a grey powdery substance. Mix this grey powder with a bit of water to make a thick, sticky compound. Dip fuses into the substance and allow them to dry. They will then ignite when struck with the striker. This substance will also make the lighting of fuses by other methods much easier. Ninja carry striking blocks or pads strapped to their fingers, wrists, or to the backs of their hands. A string or cord can be tied to or through a striker so that it can be worn on the wrist, belt, or around the neck (see photo 22). To light a device, first cover a fuse with the black igniter substance, and then scrape the igniter with the striker just as one would light a kitchen match or an emergency flare. Rubbing the striker against the igniter produces the necessary friction to light the igniter,

IMPROVED NINJA SMOKE DEVICES

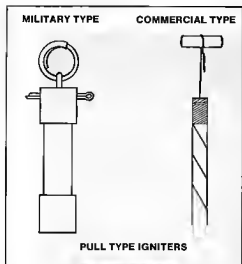


FIGURE 10

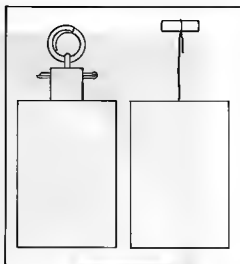


FIGURE 11



## IMPROVED NINJA SMOKE DEVICES



which in turn lights the fuse (see photos 23, 24).

Another way of gaining access to the striker and igniter compounds is simply by manufacturing them directly.

### Red Striker Compound Formula

Chemical—parts by weight

Dextrine—2 lbs. *246 g*  
Mucilage (drug store variety)—3 lbs. *1113 g*  
Red Phosphorous—5 lbs. *1965 g*  
Sand (fine grade)—3 lbs. *1113 g*

Mix the ingredients and then add a sufficient amount of water to make a slightly thin paste. Smear this on the striking device and allow it to dry. Make sure that the sand is mixed well before applications. Objects that make good strikes are large buttons, belt buckles, arm bands, and clips on pins or novelty buttons (see figure 12).

### Black Igniter Compound Formula

Chemical—Parts by weight

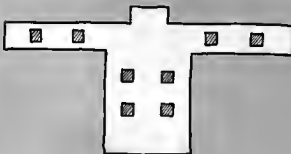
Black Antimony Sulfide (wet)—3 lbs.  
Dextrine—2 lbs. (or Mucilage—3 lbs.)  
Potassium Chlorate (wet)—5 lbs.

Danger

If mixed when dry, the black antimony sulfide and the potassium chlorate will explode. Wet both of them down before mixing. Add the thickening agent (dextrine, mucilage, or glue) and dilute with enough water to form a thick, sticky paste. Dip the fuses into this mixture and allow them to dry (see photo 25). When scraped quickly against a striker or lit with a match, the dried compound will ignite the fuse.

Any smoke device, however large or small, no matter which formula is used, is based upon the two types discussed in the production sections, Sections 1 and 2. Once an individual possesses the knowledge of how to make such devices, however, they must learn how to use them to perform escapes and retreats, or infiltrations and attacks.

## STRIKER PADS



## ON CLOTHING

BELTS



BELT BUCKLES



## WRISTS AND HANDS

FIGURE 12



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## PART TWO

---

### SECTION 1: INDIVIDUAL KA TON JITSU SKILLS FOR USE WITH SMOKE DEVICES

If a Ninja is on a mission, he or she will normally carry at least two Type 1 smoke devices. In battlefield situations, each Ninja may carry twice that many. A Ninja will also carry two small Type 2 devices at all times, and as many as six if on a mission or in the field.

Smoke devices are normally ignited and placed strategically so that the smoke will settle in or travel through a certain area. If outside, always check which way the wind is blowing. As the device becomes hot when ignited, do not hold onto it or place it among combustible materials. This is not always a concern. If a fire starts, it may be so much the better for one's purposes.

The fuse can be lit with any lighting device. Disposable butane lighters work well, and matches or alighted lantern work, also. Friction type fuse mechanisms, require a striker. Do not drop the device in water. Place it in the driest area possible and perform whatever accompanying Ninja trick, technique, or action is appropriate to the situation at hand.

The following is a list of personal options available to a Ninja, contingent upon igniting a smoke device. These actions are primarily evasive, with the understanding that the Ninja can shift from defense to offense at any step of the way, turning and attacking the enemy when they are the most vulnerable. Specific hypothetical situations in the following section will illustrate how these skills can be combined and executed in actual combat.

1. Ignite smoke device.

2. Take evasive action.

A. Attack and escape.

B. Under the cover of smoke, flee the area as quickly as possible, making good use of other cover and concealment as well.

C. Hide and let pursuers go past; then escape in another direction.

D. Hide and make the enemy think that the intruder has gone by opening a door or window. Escape when enemy gets tired of looking and gives up.

### Hiding and Concealment Tactics

Above all else, when using hiding tactics, remain completely still and silent. Do not look at foes directly or they may sense a presence, having the feeling that someone is watching them. Always be ready to fight or to quickly silence enemies if discovered.

1. Hide above pursuers:

A. In trees.

B. Among rocks.

C. On ropes or ladders.

D. In or on buildings.

2. Hide below pursuers:

A. Fall flat on the ground at night.

B. Crouch behind or among objects, beneath the average level of sight.

C. Slip down into a concealed pit or secret tunnel.

D. Hide among reeds, under a river bank, or under water.

E. Hide under objects (cars, furniture, etc.)

### Evasive Actions

1. Open, close, lock, jam, or spike shut doors and windows.

2. Knock down or throw objects behind, into the path of pursuers.

## IMPROVISED NINJA SMOKE DEVICES

3. Drop booby traps (tetsubishi, grenades, etc.) behind for pursuers to run into.

### Deceptions

1. Open or break through a door or window, making pursuers think that someone has gone either out or in.

2. Throw a heavy object into a body of water to make a loud enough splash for enemies to think that someone has dived, jumped, or fallen in it.

3. Hide momentarily, and have a nearby partner draw off the pursuer.

4. Drop a dummy grenade to scatter or delay pursuers. If pursuit continues, drop a live grenade. Enemies will often think it to be a dud as well, and will rush right into it.

5. Drape a cloak, blanket, or rain poncho over a bush, stump, chair or other such object to simulate the form of a person.

6. After hiding, use a disguise to escape.

### Distractions and Delaying Tactics

1. Simulate or start fires.

2. Have partners cause a disturbance in another area.

3. Leave a small recording device in a specific room or area, with a specially recorded distracting sound (such as voices, shouting, gunfire, etc.). Leave a certain amount of blank time on the tape, turn the volume up, and set it on play. The blank delay portion will play through until it reaches the desired sound effect distraction.

4. Lead guards, sentries, or pursuers deliberately into prearranged booby traps, mines, or ambushes.

## SECTION 2: NINJA STRATEGIES AND TECHNIQUES FOR USING SMOKE DEVICES

The Ninja primarily use smoke devices for two main purposes: 1) *Attack* (Insertion and/or Infiltration), and 2) *Retreat* (Evasion and/or

Escape). Each of these strategies and the techniques involved call for certain levels of reception, distraction, and obscuring movement.

### Attacking: Insertion and Infiltration

On the individual or small squad level, smoke devices can be used as a distraction to gain entry into guarded areas or buildings in order to perform a mission. The fear of fire will cause a distraction and enough confusion to allow the Ninja to enter the area or building unseen and undetected. The Ninja may slip in under the direct cover of the smoke itself, or they may enter somewhere else while all attention is focused on the smoke of the supposed fire. For example, dense smoke from a simulated house or automobile fire will allow the Ninja enough concealment to be able to scale a fence and slip away into the shadows of a restricted area.

Timing of the insertion or infiltration is of the utmost importance. Onlookers should be looking somewhere else, gone to get help, or completely blinded by the smoke. Silences must be carefully maintained, however, because although the smoke obscures vision, it will not inhibit sound in any way.

On the larger squad level, smoke screens will conceal the movements of a frontal, rear, or flanking assault. The Ninja know from experience that a blinded opponent is nearly helpless. Enemies who cannot see, cannot fight effectively. For example (see figure 13) a Ninja assault force can set up a smoke screen so that it will pass through a target area from one end to the other, such as from front to rear. Judging from the direction of the incoming smoke screen, the enemy will most likely be expecting a frontal assault and will prepare for such. To aid the element of distraction and deception further, the Ninja could make an apparent show of an impending frontal assault—complete with the feigned (or recorded) sounds of troops, firing weapons, or even vehicles.

As the enemy braces for the frontal attack, their forces will most likely become rigid, losing their flexibility. They, instead of the expected frontal attack, the Ninja will attack from the rear—still concealed by the incoming smoke screen as it passes through the intended area. This will instill confusion and fear. As the enemy turns all or part of its forces to deal with the rear assault, another frontal assault can be feigned or actually launched. Ninja forces are free to feint, attack, or retreat in any direction to confuse or frighten the enemy and

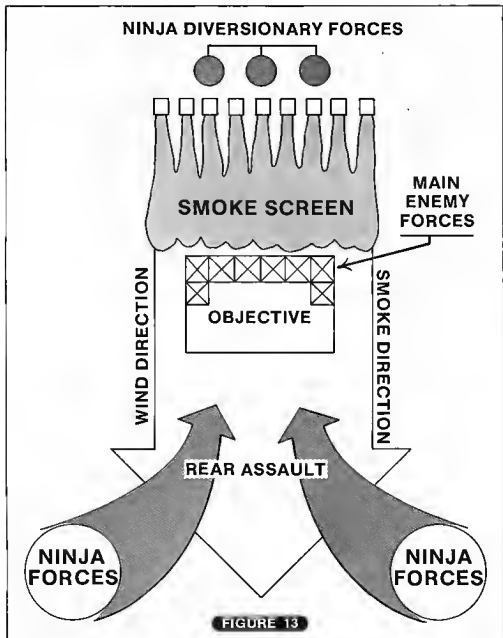


FIGURE 13



gain the advantage. As long as the enemy cannot see how many Ninja are attacking or from what direction, opponents will be hard pressed to adequately defend their position.

If the wind changes, smoke screens can be ignited in other areas to compensate. The Ninja may even feint in various directions until they find a weakness in the enemy's defenses, and then attack in force to capitalize on it. When smoke is properly used, the enemy must resort to second guessing in the midst of confusion, and the Ninja will be in control of the situation, possessing the upper hand.

### Retreating: Evasion and Escape

The same principles, strategies, and techniques used for attacking can be applied to retreating as well. On the individual or small squad level, smoke devices provide the necessary distraction and/or concealment of activity and movement necessary for evasion or escape.

Imagine that a Ninja is being chased by enemies down a corridor or hallway. While running, the Ninja sets off a smoke cloud or other device. The pursuers may rush into the smoke cloud, or they may hesitate before entering it fearing that they may be walking into a surprise attack or booby trap (which, of course, the Ninja is completely capable of doing). In any case, for an instant they have lost sight of the Ninja. That is tantamount to all the time that a trained Ninja needs. The Ninja may very well drop some booby trap such as tetsu-bishi (caltrops), toss a hand grenade over his shoulder as he rounds a corner or ducks into another chamber, and then make good his escape. At times a Ninja will hide in an area, under the very noses of his enemies, and make them think that he has already fled or escaped. The Ninja can let his foes pass him by, being prepared to dispatch them if he is discovered again.

The enemy may rush through the smoke cloud in hot pursuit, wait until the cloud clears, or proceed cautiously into the smoke. It is up to the Ninja to use the situation to his advantage. The trained Ninja knows that most people assume that an open door or window represents a sure sign that someone has gone through it. He may open or break through a door or window to escape, or to divert his pursuers by making them think he has gone a certain way. In actuality, the Ninja may conceal himself and wait until the enemy has given up searching for him. Then he will sneak out, after the searchers have been worn out or have

gone. The Ninja may escape covertly, or openly with the aid of a disguise. Using a disguise, the Ninja may escape in broad daylight, right under the noses of the enemy. The basic concept at work in both of these strategies is to use the enemy's natural expectations and assumptions against them.

On the larger squad level, such as the tactical battlefield, smoke screens provide cover to break off an assault, regroup and counterattack, or ambush, delay, or destroy pursuing forces. Even superior forces will hesitate chasing after the Ninja once the enemy learns that deadly booby traps and rear-guard assault teams, silent ambushes and mine fields, are waiting to make such pursuit very costly. Runners could even divert the pursuers off the track of the main force, leading them, if possible, into a deathtrap (such as a mine field or a silent ambush). Under the cover of smoke, the enemy cannot see what they are fighting.

The optimum retreat strategy is to contain the enemy forces by pinning them down, or at the very least, slowing them down with harassment while the main group retreats, then folding the rear guard up—fading into the smoke and disappearing like phantoms. The best retreats occur when the enemy realizes only too late that the Ninja are gone.



## APPENDIX A FORMULAS

Remember that all powders should be sifted and mixed thoroughly in a spark free environment. Powders should be tamped lightly, never packed or rammed. All parts listed are by measures of weight, never by measures of volume. Any scale or system of weights can be used. Each of the formulas presented below is separate from the others, and should be used, individually. Never combine formulas or parts of formulas.

### Black Smoke

#### Formula 1 \*1

Hexachloroethane—3 50%  
Naphthalene—1 40%  
Magnesium Powder—1 10%

#### Formula 2

*Elephant*  
Ivory Black—1 17%  
*Valium*  
Potassium Chlorate—3 50%  
Rosin—1 *Valophonium* 15%  
Sugar—1 16.5%

#### Formula 3 \*1

Charcoal—1 12.5%  
(Lampblack)—1 12.5%  
Realgar—1 12.5%  
Rosin—1 *Valophonium* 12.5%  
Salt peter—4 50%

#### Formula 4 \*1

Hexachloroethane—20 54.5%  
Magnesium Powder—9 25%  
Naphthalene—7 19.5%

#### Formula 5 \*1

Alpha Naphthol—3 7.2%  
Aluminum Powder—2 4.8%  
Anthracene—1 2.4%  
Charcoal (fine grade)—5 12%  
Hexachloroethane—12 28.3%  
Salt peter—16 38.7%  
Sulfur—2.5 6%

(\* Use Igniter)

### White Smoke

#### Formula 1 \*1

Charcoal (fine grade)—1 3.4%  
Salt peter—12 4%  
Sulfur—16 4.6%

#### Formula 2 \*1

*Valium*  
Ammonium Chloride (fine grade)—1 16.7%  
Potassium Chlorate—3 51.1%  
Rosin—1 *Valophonium* 16.6%  
Sugar—1 16.6%

#### Formula 3 \*1

*Valium*  
Potassium Chlorate—3 43.2%  
Salammoniac (fine grade)—3 43%  
Sugar—1 14.1%

#### Formula 4 \*1

Hexachloroethane—1  
Zinc Dust—2

#### Formula 5 \*1

Hexachloroethane—25 10%  
Zinc Dust—14  
Zinc Oxide—11

#### Formula 6 \*1

*Valium*  
Ammonium Chloride—1 0%  
Potassium Chlorate—3 68%  
Sugar—1 20%

### Red Smoke

#### Formula 1 \*1

*Valium*  
Paranitraniline Red—3 60%  
Potassium Chlorate—1 20%  
Sugar—1 20%

# IMPROVISED NINJA SMOKE DEVICES

## Formula 2

*Kaliu* Diethylaminorosindone—24 48 %  
Potassium Chlorate—13 26 %  
Sugar—13 26 %

## Formula 3 \*1

*Kaliu* Antimony Sulfide—4 16 %  
Gum Arabic—1 4 %  
Potassium Perchlorate—5 20 %  
Rhodamine Red—10 40 %

## Formula 4 \*1

*Kaliu* Auramine—2 10 %  
Chrysoidine—6 30 %  
Potassium Chlorate—7 35 %  
Sugar—5 25 %

## Formula 5

*Kaliu* Methylaminianthraquinone—21 42,5 %  
Potassium Chlorate—13,5 27,5 %  
Sodium Bicarbonate—10 20 %  
Sulfur—5 10 %

## Yellow Smoke

### Formula 1

*Meli* Antimony Sulfide—1 20 %  
Meal Powder—1 20 %  
Red Arsenic—1 20 %  
Saltpeter—1 20 %  
Sulfur—1 20 %

### Formula 2

*Kaliu* Beta-Naphthylene Azodimethylaniline—5 45,5 %  
Potassium Chlorate—3 27,3 %  
Sugar—3 27,2 %

### Formula 3

*Kaliu* Auremine—11 33,3 %  
Chrysoidine—3 9 %  
Sugar—8 24,3 %  
Potassium Chlorate—11 33,4 %

### Formula 4

*Kaliu* Auramine 0—13 39,3 %  
Potassium Chlorate—7 27,7 % (\* Use Igniter)

*Natrium*

Sodium Bicarbonate—10 30 %  
Sulfur—3 9 %

## Formula 5 \*1

*Kaliu* Paranitraniline Yellow—2 50 %  
Potassium Chlorate—1 25 %  
Sugar—1 25 %

## Green Smoke

### Formula 1 \*1

*Kaliu* Auramine—3 15,7 %  
Indigo (synthetic)—5 26,3 %  
Potassium Chlorate—6 31,7 %  
Sugar—5 26,3 %

### Formula 2

*Kaliu* Auramine 0—6 12 %  
1,4-D-P-Toluidinoanthraquinone—14 28 %  
*Natrium* Potassium Chlorate—13 26 %  
Sodium Bicarbonate—12 24 %  
Sulfur—5 10 %

### Formula 3

*Kaliu* Auramine—5 24,7 %  
Indigo—9 26,4 %  
Potassium Chlorate—11 32,5 %  
Sugar—9 26,4 %

### Formula 4 \*1

*Kaliu* Antimony Sulfide—5 22,7 %  
Gum Arabic—1 4,5 %  
Malachite Green—10 45,4 %  
Potassium Perchlorate—6 27,4 %

## Blue Smoke

### Formula 1 \*1

*Kaliu* Indigo (synthetic)—8 40 %  
Potassium Chlorate—7 35 %  
Sugar—5 25 %

### Formula 2

*Kaliu* 1,4-Dimethylaminoanthraquinone—2 50 %  
Potassium Chlorate—1 25 %  
Sugar—1 25 %

## IMPROVISED NINJA SMOKE DEVICES

### Formula 3 \*I

Antimony Sulfide—420%  
Gum Arabic—15%  
Methylene Blue—1050%  
Potassium Perchlorate—525%  
*Valium*

### Igniters

#### Formula 1

Dextrine—0.636%  
Red Arsenic—318%  
Saltpeter—1060,4%  
Sulfur—318%

#### Formula 2

Dextrine—143%  
Red Arsenic—417,3%  
Saltpeter—1461%  
Sulfur—417,4%

#### Formula 3

*Valium*  
Chlorate Potassium—3409%  
Charcoal (fine grade)—1731%  
Nitrate Strontia—340%  
Red Gum—0.557%

#### Formula 4

Antimony Sulfide—410,8%  
Meal Powder—410,8%  
Saltpeter—2464,3%  
Sulfur—513,5%

(\* Use Igniter)

## APPENDIX B: SUPPLIERS

### Suppliers and Sources for Chemicals:

Capitol Fireworks  
1805 West Monroe Street  
Springfield, Illinois 62704

The Chemical Shed  
944 E. Baseline  
San Bernardino, California 92410

City Chemical Corp  
132 W. 22nd Street  
New York, New York 10011

D & R Enterprises  
P.O. Box 14741  
Cleveland, Ohio 44114

Hagenow Laboratories  
1302 Washington Street  
Manitowic, Wisconsin 54220

Merril Scientific  
1665 Buffalo Road  
Rochester, New York 14624

Richard O. Wolter  
326 Summit Court  
Schaumburg, Illinois 60193

Westech Corporation  
P.O. Box 593  
Logan, Utah 84321

Each of these suppliers require a \$2.00 fee for lists of their chemicals and other supplies.

### Supplier of Fuse and Pull Type Igniters:

Phoenix Systems Inc.  
P.O. Box 3339  
Evergreen, Colorado 80439

Send \$1.00 for a catalog.



### IMPROVISED NINJA SMOKE DEVICES

At last, the secret of manufacturing Ninja smoke producing devices is revealed. In this book, Toshitora Yamashiro, Grandmaster of the Nine Shadows of the Koga Ryu (author of *Deadly Weapons of the Koga Ninja*), explains in explicit detail the fine art of Yogan (Ninja chemistry). Learn the simple procedures for making smoke devices from readily available supplies. Sections on strategy and techniques tell how to evade the enemy, vanish into an exploding smoke cloud and create distractions. This manual is step-by-step, fully illustrated with many secrets never before printed and provides one more skill of the legendary Koga Ninja.